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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,124	01/29/2004	Sven Hansen	873-011675-US (PAR)	4364
2512	7590	09/13/2005		
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EXAMINER NELSON, VIVIAN HSU	
			ART UNIT	PAPER NUMBER
			2851	
DATE MAILED: 09/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/767,124	Applicant(s) HANSEN, SVEN	
	Examiner Vivian Nelson	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 6-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Responsive to communication received on 18 August 2005.

The restriction requirement and groupings are restated as follows:

- Group I: Claims 1-5 and 13-15, drawn to a method for adjusting an alignment microscope, classified in class 356.
- Group II: Claims 6-12, drawn to the structure of a photomask, classified in class 430.

Applicant elects the claims of Group I (i.e. claims 1-5 and 13-15) without traverse; therefore, the claims of Group II (i.e. claims 6-12) are withdrawn from consideration.

Consideration of Group I claims on the merits is given below.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 13-14 are rejected under 35 U.S.C. 102(b) as being unpatentable in view of Tanaka et al.

1. The method of claim 1 is taught by Tanaka as having:
 - a. an alignment mask 5 with at least one alignment mark 53 on one side 51 and being reflective on the other 52 in the area opposite the alignment mark 53 (col. 2 par. 4);
 - b. focusing the alignment microscope 1 to the alignment mark 53 (col. 2 par. 4);

- c. refocusing the microscope 1 to the mirror image 53' of the alignment mark 53 generated by the reflective side 52 (col. 4 par. 1 and Fig 1);
 - d. comparing positions of the alignment mark 53 and the mirror image 53' of the alignment mark 53 (col. 4 par. 1 and Fig 2);
 - e. adjusting the microscope 1 so the alignments mark 53 and the mirror image 53' superimpose (col. 5 par. 1 and Fig 2);
 - f. repeating steps (b) through (e) until the alignment mark 53 and mirror image 53' are aligned (col. 5 par. 1).
2. Tanaka teaches at least one alignment cross on the alignment mask 5 (claim 2) in col. 2 par. 3 and Fig 1.
3. In claim 3, after the microscope 1 has been focused to the alignment mark 53, Tanaka shows that the microscope is adjusted so that the alignment mark 53 is located in the center of the image – see Fig. 1.
4. Further, once the microscope 1 has been focused to the alignment mark 53, the image and/or position values of the alignment mark 53 is/are stored (claim 4) as described by Tanaka in col. 3 par. 1.
5. When only steps (d) and (e) are repeated, the position of the mirror image 53' of the alignment mark 53 is compared with the position of the alignment mark 53 in the stored image (claim 5) – see again Tanaka col. 4 par. 1.
6. The method of claim 13 for exposing a substrate through an exposure mask consists of adjusting the alignment microscope 1 according to claim 1 (see above);

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adjusting the exposure mask and the substrate by adjusting the alignment microscope 1

(col. 5 par. 1 and Fig 2); and

exposing the substrate through the exposure mask (col. 4 par. 1).

7. Tanaka's reference also demonstrates (claim 14) shifting between the steps of adjusting the alignment microscope 1 and adjusting the exposure mask and the substrate with respect to one another in col. 5 par. 1 and Fig 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

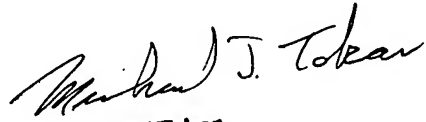
Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. in view of Nishi et al. (patent #5,739,899).

8. According to Tanaka, the alignment microscope 1 and exposure mask and the substrate are shifted and adjusted with respect to one another until alignment is achieved (see above). But Tanaka does not specifically refer to a transparent plane-parallel correction plate for use during the adjustment of the alignment microscope. Nishi teaches plane-parallel plates as correction optical members within the line of the optical path or axis (col. 1 lines 46-50 and col. 26 lines 11-14). It would be obvious to one of ordinary skill at the time of invention to use the plane parallel correction plate in adjusting an alignment microscope to eliminate telecentricity errors.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

vhn


Michael Tokar
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